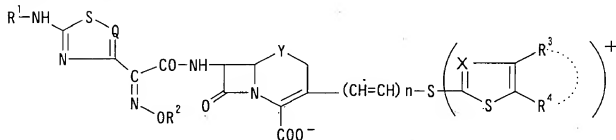


Abstract

A novel cephem compound of the formula:



5 wherein R¹ is a phosphono group or a group convertible to a phosphono group; R² is a hydrogen atom or a group having a linkage through a carbon atom; each of Q and X is a nitrogen atom or CH; Y is S, O or CH₂; n is 0 or 1; one of R³ and R⁴ is a pyridinium group which may be substituted and the other is a hydrogen atom or hydrocarbon group which may be substituted, or R³ and R⁴ taken together may form a quaternized nitrogen-containing heterocyclic ring which may be substituted, or its ester or its salt, which has a superior anti-bacterial activity, stability, absorbability, etc., a production thereof and a pharmaceutical composition containing it, is provided.